

A Proposal for a

Downtown People Mover System for Boston, Massachusetts

Prepared by the

**Boston Redevelopment Authority
Transportation Planning Department**

June, 1976

Boston Redevelopment Authority

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July 7, 1976

Secretary Frederic P. Salvucci
Executive Office of Transportation
and Construction
One Ashburton Place - 16th Floor
Boston, Massachusetts 02108

Dear Fred:

RE: DOWNTOWN PEOPLE MOVER PROPOSAL

As Boston's planning and urban renewal agency we have pursued the Urban Mass Transportation Administration's (UMTA) demonstration program for a Downtown People Mover (DPM) system. A letter of interest was sent in May, as you know, and a proposal was submitted on June 28, a copy of which is attached.

In order for Boston to be considered for selection as a DPM demonstration city, letters of endorsement and commitment must be received at UMTA by July 30. Of particular importance is an indication of support from the Metropolitan Planning Organization which you chair, and inclusion in necessary official planning documents. We are now requesting that you adopt a position and make your official views known to us and UMTA by the end of the month. By copy of this letter we are also seeking comments and endorsements from other agencies and individuals.

We understand that sixty-five cities submitted letters of interest but that under 15 proposals were received by UMTA. Selection of demonstration cities will be in November followed by Capital Grant applications in December. An award of perhaps \$3 million for the preparatory phase (preliminary engineering, more detailed planning) will be made early in 1977 to establish project design and administration. The Capital Grant for implementation in the case of Boston would involve around \$35 million with the UMTA schedule looking towards a complete installation by 1980.

The DPM system proposed for Boston would link Government Center, the Markets area and Freedom Trail to the Charlestown Navy Yard via North Station and Boston Garden. We have planned the routing to be compatible with the proposed reconstruction of the Central Artery. As described in the proposal, this "horizontal elevator" offers multiple opportunities as a connector and distributor among transportation terminals and activity centers, thereby unifying the rather disjointed elements within its service area. It would help fill several transportation vacuums - rail commuter distribution from North Station, U.S.S. Constitution National Park, Charlestown Navy Yard and community connections to downtown, better evening and weekend use of Government Center Garage, etc. The development stimulus and "value capture" opportunities at the Navy Yard, North Station and the Markets will help enhance and renew this section of the downtown area. The overall environment (including a wide variety of weather

Secretary Frederic P. Salvucci (continued)

conditions) and transportation setting provide a good means of demonstrating this kind of system which we regard as a complement to line haul transit, not a competitor. A ride on such a system will also provide an experience in itself, giving views of the city not otherwise possible.

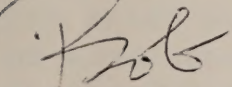
Although people movers represent a relatively new technology, the demonstration program calls for the application of a proven "off-the-shelf" system. We have investigated a number of existing systems and feel assured that safe reliable and cost-effective people movers are available. It also appears that the benefits provided by the proposed system would be very difficult to obtain by other means.

Much work needs to be done to confidently establish or reject the efficacy of the DPM in Boston, both from technical and institutional levels. Our analysis to date points to a favorable cost and resource situation, particularly if joint development and value capture can help provide station facilities and maintenance/operational supports. What we need now is a tentative but serious commitment to develop the concept so that UMTA may be assured of the institutional as well as the technical credibility of the project, insuring that Boston remains a contender for the demonstration program.

Two important issues must be better defined for the DPM proposal - the availability and source of the necessary local 20% share and the group which might actually run the system. In both these cases, I believe options must be held open, of necessity, until the characteristics of the system are better established in more detailed planning, development and engineering work. The most pressing item would be, if Boston were selected, to produce the front end money or equivalent services or collateral for the local share of plan development and engineering costs. This would likely be in the range of several hundred thousand dollars.

I will set up a meeting with you in the near future to aid in your appraisal of the DPM concept and its implications, so that the proposal may be put in order. Your interest in retaining and pursuing this exciting opportunity for Boston is most appreciated.

Yours very truly,



Robert T. Kenney

Boston Redevelopment Authority

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June 28, 1976

Mr. Robert E. Patricelli
Administrator
Urban Mass Transportation Administration
400 7th Street, S.W. Room 9324
Washington, D.C. 20590

ATTENTION: Steven A. Barsony

Dear Mr. Patricelli:

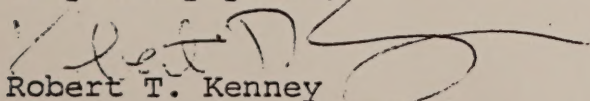
We are pleased to submit to UMTA the attached proposal for a People Mover System linking Boston's downtown, business and government districts with the residential, institutional and commercial development areas in Charlestown. The Boston Redevelopment Authority, as the City's planning and renewal agency, feels that a project of this nature can do much both to foster new development in Charlestown and to enhance amenities in Boston's downtown.

We feel that Boston offers an excellent opportunity to demonstrate numerous aspects of people mover technology: its applicability in a northern climate, its ability to handle a variety of passenger demands, its utility as a supplement to the rapid transit system, and its impacts on new development. Our proposal contains possibilities for cooperative public/private funding and for direct incorporation of stations into existing and planned structures. The proposed system would complement a \$150 million urban renewal program nearing completion in Government Center and a \$120 million public and private investment program for the Charlestown Navy Yard and the National Historic Park. Overall, it fits into a regional policy oriented toward public transportation and a statewide policy aimed at revitalizing urban centers.

Our staff is presently engaged in obtaining the required letters of endorsement from city, state and regional agencies, and in refining the detail of the concepts presented in the proposal with the goal of presenting a capital grant application this fall.

In developing this proposal, we have become very excited about the possible benefits to the city of a downtown people mover system. We hope that you share this enthusiasm and look forward to working further with UMTA on this promising demonstration project.

Very truly yours,


Robert T. Kenney

A
PROPOSAL FOR A
DOWNTOWN PEOPLE MOVER
SYSTEM
BOSTON, MASSACHUSETTS

URBAN MASS TRANSPORTATION
ADMINISTRATION
DOWNTOWN PEOPLE MOVER (DPM)
DEMONSTRATION PROJECT

BOSTON REDEVELOPMENT AUTHORITY
TRANSPORTATION PLANNING DEPARTMENT

JUNE 30, 1976

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EAST
BOSTON

LOGAN
AIRPORT

CHARLESTOWN

PROPOSED D.P.M.
BOSTON NAVAL
SHIPYARD

CHARLES RIVER

SUMMER
TUNNEL
CALLAHAN
TUNNEL

NORTH
END

BOSTON
HARBOR

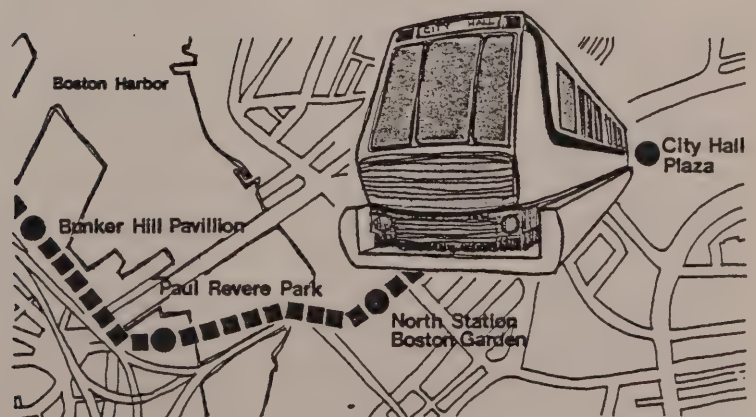
NO. PROPOSED D.P.M.
STATION

GOVERNMENT
CENTER

FINANCIAL
DISTRICT

BOSTON REDEVELOPMENT AUTHORITY TRANSPORTATION PLANNING DEPARTMENT	
PROPOSED DOWNTOWN PEOPLE MOVER LOCATION MAP BOSTON	
DATE: JUNE 30, 1976	Page i

1. Project Objectives



I. PROJECT OBJECTIVES

The Boston Redevelopment Authority is pleased to submit to UMTA this proposal for a Downtown People Mover System. We see our proposed project as a multi-purpose application of existing technology in a dense urban center, typical of those found in the northeastern United States.

The setting for the project is Boston's Downtown (See Location Map), the center of a metropolitan region of 3 million, and the intown community of Charlestown, with its population of over 15,000 along with commercial, industrial and Navy Yard development. The area to be served includes a variety of activity centers of regional and national importance, including:

- . Government Center, home of city, state and federal offices, with combined public and private employment of 24,000.
- . The Faneuil Hall Marketplace, being newly redeveloped to include restaurants, offices, retail and entertainment uses, and a part of Boston's historic Freedom Trail.
- . The Government Center Parking Garage, a major city-owned facility which is also the terminal for 14 city and regional bus routes and a station for two subway lines.

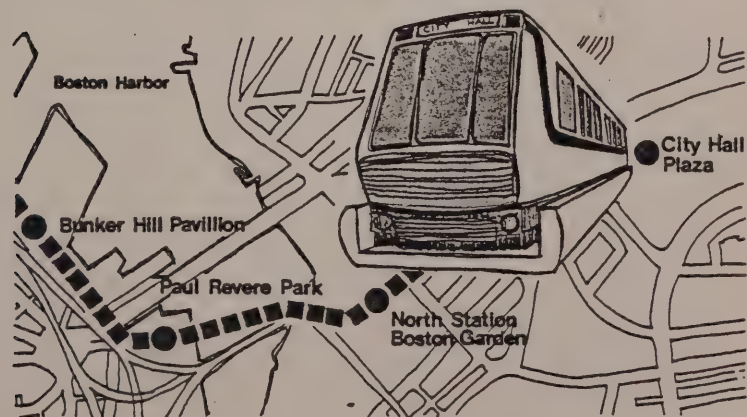
- . Boston Garden, Boston's only major downtown sports arena, which hosts the Bruins and Celtics and numerous other sporting and entertainment events.
- . North Station, one of two downtown commuter rail facilities, serving all seven of the commuter rail lines for the communities to the north and west of Boston.
- . Residential neighborhoods in the Charlestown district of Boston which have recently experienced a loss of direct transit service as a result of removal of the Orange Line elevated.
- . The Bunker Hill Pavillion and U.S.S. Constitution National Park in Charlestown, historic attractions for U.S. and foreign visitors.
- . The 103-acre site of the former Charlestown Navy Yard, slated for redevelopment and reuse for housing, hotel/convention facilities, light manufacturing or institutions.

Within this setting, a Downtown People Mover System is proposed to achieve the following objectives:

- 1) To provide a fast, convenient and weather-protected distribution system for downtown pedestrians currently using circuitous or dangerous routings;
- 2) To provide alternative transit service for Charlestown residents;

- 3) To link historic sites in Charlestown with the downtown Freedom Trail;
- 4) To alleviate parking demands at the Charlestown historic sites and at Boston Garden by facilitating connections to the Government Center Garage;
- 5) To encourage use of commuter rail by providing better connections from North Station to Government Center, the CBD and other public transportation facilities.
- 6) To provide direct access to the Navy Yard site, thus acting as a stimulus for development;
- 7) Where possible, to combine stations within existing or new structures to the mutual benefit of both;
- 8) To enhance the local potential for joint development/value capture opportunities as part of the development mechanism for the Downtown Boston People Mover System;
- 9) To reduce the escalating use of the private automobile as a means of access to the downtown and as a means of transportation in the urban environment.

2. Project Description



II. PROJECT DESCRIPTION

A. ROUTE CONFIGURATION AND ANALYSIS

The proposed alignment consists of a total of 3.2 one-way miles of automated guideway extending from the Haymarket Square area adjacent to City Hall Plaza to the northern end of the former Charlestown Navy Yard. The heart of the system as proposed would consist of parallel guideways from its origin to the point where it enters the National Park. From there it would form a loop utilizing a single guideway with the northbound leg running through the National Park and Navy Yard. The southbound return leg of this loop is located along Chelsea Street just outside the wall of the Historic Area rejoining the northbound leg near Water Street. This proposed alignment is shown on the site plans on pages 29 and 30.

Nine stations are proposed along the route of the People Mover System, to accommodate the activity centers mentioned in Section I above. They are as follows:

1) City Hall Plaza

Located at the southern terminus of the system, this station will serve as the main connection with the downtown historic, government and business areas. It will be located on Urban Renewal Parcel C-7, which is now owned by the Boston Redevelopment Authority and used as a temporary parking lot and an entrance to the Haymarket transit station. Because

of the topography of the City Hall Plaza in relation to this parcel, a direct pedestrian connection from the elevated platform to the Plaza across Congress Street is possible as well as desirable considering the volumes of people who will use this station. This southern terminus will be tied in with the development potential of the parcel itself.

2) Government Center Garage

This station will be incorporated into the easterly end of the nine-level garage structure on air-rights above the existing MBTA bus area. This will allow connections from the upper levels of the 1,865-vehicle capacity garage via elevator or escalator to the station platform level. This station will also serve the MBTA bus loading area and the Orange and Green subway lines at Haymarket Station located directly below the garage.

Since the garage is owned by the City of Boston and under the control of the Real Property Department, there will be no site acquisition costs necessary to construct this station.

3) North Station, Boston Garden

It is expected that after further engineering feasibility studies, the platforms for this station can be located within the lobby area of Boston Garden itself. If this proves possible, the platform would be on the same level as the lobby of

the Garden complex providing excellent connections for its patrons. Good access will also be made via escalator from North Station commuter rail platforms. This stop will represent a major demand point on the system because of the 14,000 commuters who arrive and depart from North Station each day. Most of these commuters have destinations to the south and west of the station. The Massachusetts Bay Transportation Authority currently has programmed for 1977 a \$3.5 million program of pedestrian improvements within North Station which presently suffers from extremely long transfer times for patrons who wish to use both the commuter rail facilities and the existing rapid transit system. These improvements will be coordinated with the DPM system.

4) Paul Revere Park/City Square

Located on the north side of the Charles River, this station will serve primarily destinations in the immediate vicinity of City Square such as the regional YMCA, the Paul Revere Park and residential and commercial areas near City Square.

5) "Old Ironsides"

This station will serve the historical U.S.S. Constitution National Park, including the berthing of Old Ironsides and buildings containing artifacts of Naval history associated with the Charlestown ship building era, and the Bunker

Hill Pavillion. It would be located just inside the boundary of the National Park near Gates 1 and 2.

6) Navy Yard #1

Located on First Avenue near the center of the Navy Yard development this stop would serve the area which is currently proposed for a hotel and convention center. Consideration is being given to having this station constructed as an integral part of the hotel lobby when detailed plans for this complex become further developed.

7) Navy Yard #2

The area in the northern section of the Navy Yard is to be converted to high-density residential uses and is not currently served by public transportation. The People Mover System will provide the transit connections between this high-density intown residential area and the remainder of the CBD.

8) Medford

This station will serve residential areas bordering on Medford Street and adjacent blocks including two major housing projects.

9) Bunker Hill

This station is planned to be located on Chelsea Street and will serve various residential, historic and recreational land uses which today have only fair transit connections to the business, government, financial and recreational areas served by the rest of the remaining system.

B. POTENTIAL SERVICE PATTERNS

Because of the different downtown land uses served by the proposed facility, it is felt that the varying demand characteristics placed on the system will be a truly demanding test of the feasibility of a People Mover System in a downtown environment.

As currently envisioned the system will perform both collection and distribution functions. It will accommodate trips within downtown and trips from Charlestown origins to downtown for commuting, recreation and shopping. The nature of the land uses to be served indicates that ridership would be high during both peak and off-peak hours. While of primary importance to Boston residents and commuters, the People Mover is expected to become in itself a highly visible mode of travel for Boston's visitors and tourists. In addition the system is seen as a primary tool for unifying the otherwise disconnected and varied elements within its service area and more closely knitting Charlestown, and particularly the Navy Yard development area, into the downtown fabric.

Table 1 presents a trip matrix detailing the projected patronage on the People Mover System. The primary demand routes and estimated average daily patronage have been summarized as follows:

1) North Station to City Hall Plaza

Approximately 14,000 commuters arrive at North Station

TABLE 1
Average Daily Passenger Demands

TO FROM		1	2	3	4	5	6	7	8	9	TOTAL
City Hall	1	-	200	13,500	450	2,000	2,000	500	700	1,000	20,350
Garage	2	200	-	3,000	450	700	200	100	100	100	4,850
North Station Boston Garden	3	13,500	3,000	-	200	200	800	500	500	500	19,200
City Square	4	450	450	200	-	100	100	100	100	-	1,500
National Park	5	2,000	700	200	100	-	100	100	100	-	3,300
Navy Yard 1	6	2,000	200	800	100	100	-	100	-	-	3,300
Navy Yard 2	7	500	100	500	100	100	100	-	-	-	1,400
Medford	8	700	100	500	100	100	-	-	-	-	1,500
Bunker Hill	9	1,000	100	500	-	-	-	-	-	-	1,600
		20,350	4,850	19,200	1,500	3,300	3,300	1,400	1,500	1,600	57,000

each morning with 10,000 having destinations in the immediate City Hall area. Today, three major streets which are severely congested during peak hours must be crossed, creating a hazardous pedestrian environment. The People Mover would eliminate the need for any at-grade street crossings from North Station to the southerly edge of City Hall Plaza, a distance of more than one-half mile. The present average walking times and conditions from commuter rail platforms to rapid transit or downtown destinations are unsatisfactory and would be vastly improved by the DPM.

2) Boston Garden to Government Center Garage

This leg will provide a direct connection to and from the Garage for patrons of Boston Garden, providing for increased use of the Garage to serve Garden parking demands and increased safety and convenience for pedestrians using this route at night.

3) National Park to North Station, Garage and City Hall Plaza

It is projected that over 1.2 million people each year will visit the National Park which is currently being developed in Charlestown. Accessibility of the park site is limited today, however, by poor transit service, heavy traffic congestion and limited parking facilities. The People Mover System will provide the connections to rail, bus, subway and garage facilities and the related historic areas and other varied activities of downtown. The system will thus serve, for ex-

ample, as an attractive and convenient extension of the downtown Freedom Trail into the Charlestown historic area. Present shuttle bus service making this connection today is circuitous, costly and, as a result, not very well patronized.

4) Navy Yard to City Hall Plaza

With the full development of this area into hotel, convention, residential, office and light industrial uses, it will be most desirable to connect this extension of the downtown with areas of government, business and finance located in and around Government Center. When the Navy Yard is fully developed, it is possible that this link may place the greatest demands on the entire system.

The provision for a People Mover System to provide transit access to the Navy Yard site, especially its opportunities for direct connections into buildings, could very well act as a catalyst for the full development of this area. This effect could be of interest to UMTA in studying the positive impacts of a People Mover System on the economic growth of downtown areas and the possibilities for value capture through joint development in and around the stations.

C. OPERATING PLAN

Many people mover systems currently on the market have been shown to satisfy the operating characteristics desired for the Boston People Mover. Without further detailed study and analysis of the system, however, it is impossible to concentrate on a particular system at this time.

The operations characteristics which are necessary based on the preliminary feasibility study are as follows:

- 1) Hourly capacity of 12,000 - 15,000 passengers;
- 2) Capability of single-unit or train operation;
- 3) Fully automated operations;
- 4) On-line or off-line stations, subject to system chosen;
- 5) Scheduled or demand station stops.

These characteristics are necessary to serve the peak demands which will be placed on the system and still maintain a desired headway of 60 seconds. Assuming these basic operating capabilities our preliminary investigations have shown that maximum round-trip time for vehicles in the 3.2 mile loop would be 16 minutes assuming a stop is made at each of the 9 stations and that cruise velocity is 17 mph. Table 2 summarizes trip times for various combinations of station demands under these assumptions.

Because of the high level of short-term demands which will be placed on the system during peak hours, the system would operate with an inner and outer loop during these peak demand periods.

The inner loop would consist of approximately one mile of guideway running from Government Center to North Station and return. Five two-car trains operating under one-minute

TABLE 2

ROUND TRIP TIMES

NUMBER OF STATION STOPS PER TRIP	17 MPH CRUISE VELOCITY			
9	16 minutes	2 seconds		
8	15 "	31	"	
7	15 "	00	"	
6	14 "	29	"	
5	13 "	57	"	
4	13 "	26	"	
3	12 "	55	"	
2	12 "	23	"	

headways would be necessary to serve the demand levels in this corridor. The outer loop would consist of either four two-car trains on four-minute headways or eight single vehicles on two-minute headways operating over the entire 3.2 mile system. Scheduled service will probably be necessary during peak service period.

In the off-peak hours the system would operate with sixteen single unit vehicles on 60-second headways over the entire loop. As demand may moderately increase during certain periods, the system can automatically revert to a mode of operation where vehicles will use the turnaround loops as necessary.

Examples of the situations which may occur which would place high volume, short-term demands on the system are:

- the conclusion of an event at Boston Garden where approximately 3,000 people or more could simultaneously place a demand on the system to get to Government Center Garage.
 - Arrival of a commuter train at North Station where 500 to 800 people will desire to go to City Hall Plaza.
- During all of these peak demand periods the system must continue to operate and serve all other demands without sacrificing the efficiency which makes this type of transit unique and attractive.

D. SITE ACQUISITION

The alignment of the Boston People Mover System was chosen to provide the most service to the most people. Much of the area served is currently transit deficient and will greatly benefit by the new system. Also the acquisition of rights-of-way is simplified because of the system's location on publicly-owned properties.

There is only one section of right-of-way where a high level of coordination must be undertaken with private interests. This is the interface with Boston Garden where it is desired to place the station lobby within the second level lobby of the Garden complex for efficiency and safety of passengers.

All other areas are currently under the ownership of Federal, State or City agencies such as the National Park Service, the Massachusetts Port Authority, the Massachusetts Bay Transportation Authority, the Metropolitan District Commission and the City of Boston.

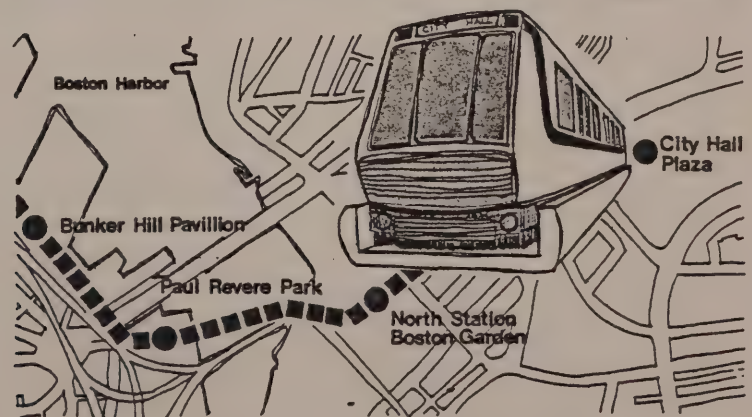
The problem of crossing the Charles River is simplified to a great extent due to the possibility of locating the support columns on the new dam which is presently under construction.

Within the area of the Charlestown Navy Yard, the opportunity exists to develop interfaces between the system and future private developments can be developed in such a way as to make stations an integral part of the lobby of resi-

dential, hotel and convention facilities.

The benefits which may be derived from this type of joint development opportunity could serve as an example for further private investment into transit system operations. In addition, the Boston People Mover System will provide a good indication as to how improved transit technology can be used to complement the development of auto restricted areas such as the ARZ currently in the planning phase in Boston.

3. Economic and Technical Feasibility



III. ECONOMIC AND TECHNICAL FEASIBILITY

The results of preliminary engineering studies show that construction of a fully automated people mover system is technically feasible in the corridor between City Hall Plaza and the Boston Naval Shipyard as shown on the Site Plan on pages 29 and 30.

All vertical grades and horizontal curvature are consistent with design recommendations as presented by several of the major developers of people mover systems. Preliminary analysis of station locations within existing structures such as the Government Center Garage and Boston Garden has shown that they are both possible and desirable. Of course more detailed engineering studies are necessary to develop specific plans.

It is our desire to investigate the possibility of providing a free-use transit system with all operating and maintenance costs being subsidized by the beneficiaries of the system such as the Government Center Garage, North Station and Boston Garden and developers of private enterprises in the Navy Yard. Further discussions and detailed economic analyses are necessary to further develop this concept. However, if it is found necessary or desirable to charge a fare on the system, a rate of 5¢ per trip would cover operational and maintenance costs (10¢ if revenue funds are issued for

the local share) and eliminate any need for the subsidies required for most existing public transportation systems. More detailed study of costs and system patronage will be necessary to confirm or modify these conclusions.

Preliminary estimates of construction costs from several people mover manufacturers have ranged from a low of \$20 million up to \$45 million of which 80% would be UMTA demonstration grant and 20% local share. For purposes of this proposal, a cost of about \$35 million has been assumed.

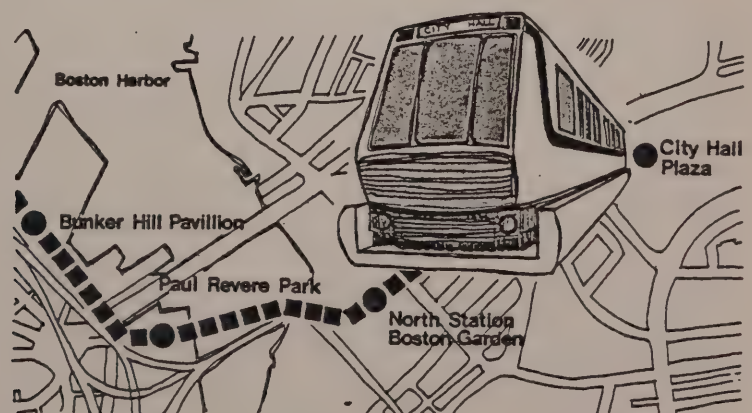
These estimates include:

- Guideway and Switching
- Stations
- Power Substations
- Control Center and Systems
- Vehicles
- Maintenance Facilities
- Communications
- Testing
- Personnel Training
- Construction Management

Operations and maintenance costs are estimated at \$2,200 per day or \$800,000 per year.

Approximately \$6 million will be sought from private sources (see Section IV - Local Funding by Value Capture) to develop 4, or possibly 5 station facilities. The remaining stations will be constructed with public funds at an estimated total cost of about \$5 million. Station costs include platforms, elevators/escalators, graphics, lighting, security, fare collection (if necessary) and public amenities.

4. Local Funding Participation Through Value Capture



IV. LOCAL FUNDING PARTICIPATION THROUGH VALUE CAPTURE

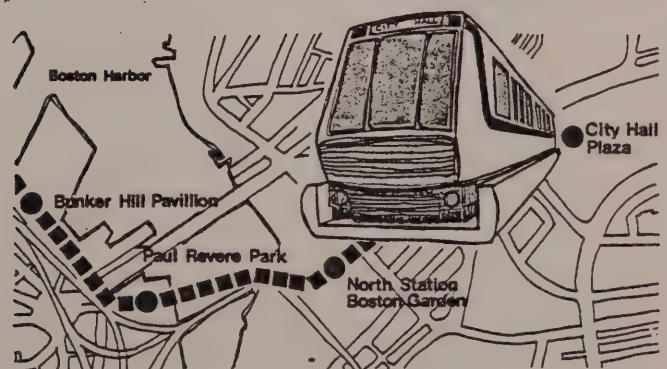
Several possibilities are being studied in order to incorporate the mechanism of "value capture" into the design and economic development of the system. Under this concept, private investors will be invited and actively sought to participate financially in the initial development and maintenance of the People Mover System. While public funding would be used to finance the construction of guideways and the purchase of equipment, local developers (both public and private) would be encouraged to help finance or otherwise provide joint use space for station facilities serving their transportation and patronage needs.

Currently, we envision stations such as the Medford, Bunker Hill, Paul Revere Park, and possibly City Hall Plaza being constructed with demonstration project funds because of their essentially public character. However, the remaining five stations could be financially or otherwise supported by local interests along the route of the system. These would include the Government Center Garage which is operated by the City of Boston-Real Property Department; the Boston Garden/North Station stop operated jointly by the Garden owners and the MBTA; the Old Ironsides station by the National Park Service; and the two stops in the Navy Yard by developers of the hotel/convention and residential complexes.

Additional developments in the Navy Yard and along Canal Street between Government Center and North Station would involve the use of private funds for construction of any additional stations required along the system.

It is our firm belief that the "value capture" concept should be a means through which urban area transit systems could be financed on the local level and that the UMTA Downtown People Mover demonstration project is a prime means through which it can initially be achieved.

5. Project Budget



V. PROJECT BUDGET.

The total estimated project cost is \$35,000,000. This includes a 20% local share of approximately \$7,000,000.

Assuming a 20-year bond issue at 7% annual interest for financing of the local share, the yearly debt service would amount to \$660,750. In addition, the annual operating and maintenance costs as estimated for the proposed system is \$797,500. Thus the total annual cost for systems operations, maintenance, and debt retirement is approximately \$1,458,250.

Table 3 shows the relationship between the annual cost of service and the amount of patronage necessary to sustain the system's operation at various rates of fare.

As can be seen from Table 3 an average daily ridership of approximately 40,000 people at a fare of 10¢ per passenger will generate sufficient funds to cover the required cost flow of \$1,458,250 annually. This means that the break-even point (with a 10¢ fare) would take place at about 70% of the estimated average daily ridership level (see Table 1) or conversely the break-even fare would be 7¢ per ride.

It is felt that as the DPM becomes more readily accepted and as development in the Navy Yard is completed, average daily ridership will increase sufficiently to cover the rise in operation and maintenance costs due to inflationary pressure.

TABLE 3

PROJECTED COSTS AND REVENUEANNUAL COSTS

Debt Service \$660,750 (1)

O & M Costs \$797,500

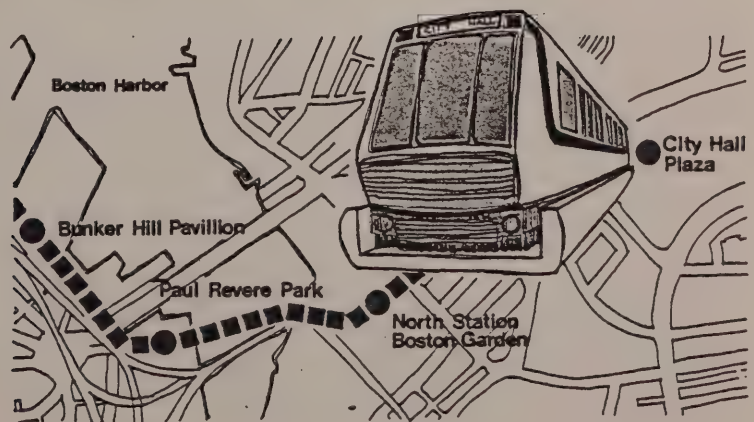
REVENUE

TOTAL ANNUAL COST \$1,458,250		<u>FARE</u>	<u>AVERAGE DAILY RIDERSHIP</u>	<u>ANNUAL REVENUE</u>
		\$.05	79,900	\$1,458,175
		.07	57,000 (2)	\$1,458,250
		.10	39,950	\$1,458,175
		.15	26,650	\$1,459,087

(1) \$7,000,000 local share bond issue - 20 years @ 7% interest

(2) Projected average daily ridership

6. Areawide Planning Context



VI. AREAWIDE PLANNING

An amendment in the five-year Transportation Improvement Program for the Boston Region 1976-1980 is being requested to incorporate the proposed Downtown People Mover System. The steps necessary to have this project included within the TIP Annual Element for fiscal year 1977 and beyond are of course being pursued. A formal request is being prepared for the Joint Regional Transportation Committee recommending that the Metropolitan Planning Organization (MPO) give its endorsement and commitments to the Downtown People Mover Project.

The transportation Plan is based on the 3C transportation planning process. It establishes the principles that the basic public transportation system will be expanded and improved, and that new means of distributing the cost of operating the system (such as value capture) will be developed. We feel that the proposed Downtown Boston People Mover System is in full agreement with the above principles.

Steps are also being taken to have this project made part of the state-required Program for Mass Transportation (PMT) which is currently being updated. The PMT is the development program for the Massachusetts Bay Transportation Authority; the updated PMT will become part of the transit portion of the TIP in the near future.

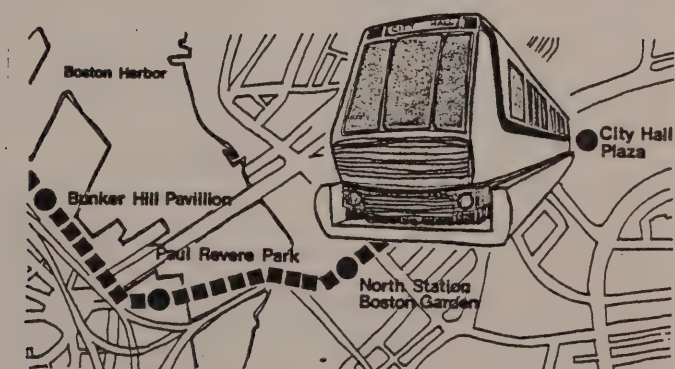
From an operational viewpoint, we feel that the proposed Downtown Boston People Mover System responds well to the Transportation Systems Management (TSM) element of the Transportation Plan. The purpose of the TSM is to coordinate the various modes of the transportation system by means of operating regulatory and service policies intended to achieve greater efficiency in the system. Because of its location and the diversity of activity centers to be serviced, the Downtown Boston People Mover provides an opportunity to bring about significant inter-modal coordination through such operational planning.

A high degree of modal integration could be expected at major intercept points along the system, including the North Station commuter rail facility, Government Center Parking Garage, and Haymarket Station bus and rapid transit terminal. In addition, the proposed project will provide an improved level of transit service to the residents of Charlestown. This is consistent with MBTA's newly adopted Service Performance Standards which are aimed at improving the level and quality of transit services in substandard service areas.

The proposed Downtown Boston People Mover System is also compatible with the current highway element in the TIP, specifically the proposed depression of the Central Artery from Massachusetts Avenue to City Square in Charlestown. One estimate suggests that as many as 50,000 vehicles per day pass

through the City Square area. Operating on an exclusive right-of-way, the proposed People Mover provides an opportunity for reducing the number of vehicle trips in this area, particularly in meeting the growing transportation service needs of the 103-acre Navy Yard development area.

7. Proposed Schedule



VII. PROPOSED SCHEDULE

This report summarizes what we consider to be the main features of the proposed Downtown Boston People Mover System. Understandably, a firm commitment regarding local financing and operating responsibilities can be made only after a full evaluation of the results of the engineering design analysis.

At this point in time, essential first steps have been initiated to attain the full endorsement of the proposed People Mover System by the several agencies which have a possible interest in this successful outcome of this effort. They include the Metropolitan Area Planning Council, the Massachusetts Bay Transportation Authority, the Massachusetts Department of Public Works, the Mayor's Office, the National Park Service and others. Pursuant to our official request, we are currently awaiting receipt of such support from the responsible planning agencies and officials. Present indications are that adequate local resources to fund our share of the engineering and capital cost of the DPM could be made available in the event Boston is chosen for an actual demonstration project. Written confirmation to this effect will shortly be furnished to UMTA.

The results of our initial engineering and feasibility study have led us to conclude that Boston, in the event it is chosen as a demonstration city, could successfully meet UMTA's

suggested schedule for implementation of the Downtown People Mover. A preliminary project schedule is shown in Table 4. The suggested time period for implementation of the DPM is compatible with significant complementary improvements planned for the demonstration project area, including North Station and Boston Garden pedestrian facilities improvements, National Park construction and Navy Yard development. The possibility of achieving this coordinated approach to transportation and land use planning and developments is a key factor in our proposal. Hopefully, this integrated approach will provide an appropriate framework in which to demonstrate the applications and impacts of a people mover system in a downtown setting.

TABLE 4
Project Schedule

NUMBER	ITEM	DATE
1)	Submission of Proposals for the Project	6/30/76
2)	Announcement of selected Sites	11/16/76
3)	Award of Capital Grants for the Preparation Phase	1/31/77
4)	Award of Capital Grant for the Implementation Phase	12/77
5)	Completion of System A+E Design	5/78
6)	Initiate Public Operations of System	10/80
7)	Completion of Socio/Economic Studies	12/81



- LEGEND:**
-  DOWNTOWN PEOPLE MOVER
 -  PROPOSED STATION

BOSTON REDEVELOPMENT AUTHORITY
TRANSPORTATION PLANNING DEPARTMENT
BOSTON, MASS.

**A PROPOSAL
FOR A DOWNTOWN
PEOPLE MOVER SYSTEM**

SCALE: SEE BAR SCALE
DATE: JUNE 30, 1976
DRAWN BY: P.E.N.
DSGND BY: R.M.C.A.



BOSTON NAVAL
(REDEVELOPMENT
AREA)

BUNKER HILL
STATION

CONSTITUTION
PARK
(UNDER
DEVELOPMENT)

U.S.S.
NATIONAL
PARK
(UNDER
DEVELOPMENT)

OLD
IRONSIDES
STATION

CHARLESTOWN

CITY
SQUARE

PAUL REVERE
PARK

CHARLES
RIVER

COMMITTEE RAIL
PLATFORMS

NORTH
STATION
&
BOSTON
GARDEN

NORTH
END

GOVERNMENT
CENTER

CENTER

MARKETS

BOSTON
CITY HALL

- LEGEND:
- DOWNTOWN PEOPLE MOVER
 - PROPOSED STATION
 - FREEDOM TRAIL
 - Ⓜ M.B.T.A. SUBWAY STATION
- BOSTON REDEVELOPMENT AUTHORITY
TRANSPORTATION PLANNING DEPARTMENT
- BOSTON, MASS.

A PROPOSAL
FOR A DOWNTOWN
PEOPLE MOVER SYSTEM

NOTE: SEE BAR SCALE DATE: JUNE 30, 1979
DRAWN BY: P.E.H. DESIGNED BY: R.M.A.

